



U.S. Department of Energy  
**Office of River Protection**

P.O. Box 450  
Richland, Washington 99352

03-OSR-0080

Mr. R. F. Naventi, Project Manager  
Bechtel National, Inc.  
2435 Stevens Center  
Richland, Washington 99352

Dear Mr. Naventi:

CONTRACT NO. DE-AC27-01RV14136 – CONDITIONAL APPROVAL OF BECHTEL NATIONAL, INC. (BNI) AUTHORIZATION BASIS AMENDMENT REQUEST (ABAR) 24590-WTP-ABAR-ENS-02-006, REVISION 0

Reference: BNI letter from R. F. Naventi to R. J. Schepens, ORP, "Transmittal for Approval: Authorization Basis Amendment Request 24590-WTP-ABAR-ENS-02-006, Revision 0, *Update Safety Requirements Document Volume II, Safety Criterion 5.4-10* and 24590-WTP-ABAR-ENS-02-014, *Adoption of NFPA 801-2003 and Removal of Fire Protection Tailoring from the Safety Requirements Document*," CCN-048862, dated January 24, 2003.

This letter provides conditional approval of the BNI referenced ABAR, 24590-WTP-ABAR-ENS-02-006. The ABAR proposed changes to the Safety Requirements Document (SRD), Safety Criterion 5.4-10. This letter transmits the associated Safety Evaluation Report (SER), which documents the U.S. Department of Energy, Office of River Protection evaluation of the ABAR.

Based upon the information in 24590-WTP-ABAR-ENS-02-006, and the attached SER, the request is conditionally acceptable as noted in the SER. As a result, there is reasonable assurance the proposed changes will not adversely affect the health and safety of the public, the workers, and the environment. The ABAR also provided reasonable assurance the proposed changes will comply with applicable laws, regulations, and Waste Treatment and Immobilization Plant contractual requirements.

As part of the amendment implementation process, please submit within 14 days of receipt of this letter the revised pages of the SRD, identifying all revisions to date. This amendment is effective immediately and shall be fully implemented within 30 days; i.e., the provisions of the amendment may be used immediately; within 30 days, controlled copies of the SRD and subordinate documents must be modified to reflect the changes associated with this amendment.

Mr. R. F. Naventi  
03-OSR-0080

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If you have any questions, please contact me, or your staff may contact Walter J. Pasciak, WTP Safety Regulation Division, (509) 373-9189.

Sincerely,

OSR:JLP

Roy J. Schepens  
Manager

Attachment

**Safety Evaluation Report (SER)  
of Proposed Authorization Basis Amendment Request (ABAR)  
24590-WTP-ABAR-ENS-02-006  
to the Safety Requirements Document (SRD)  
for the Waste Treatment and Immobilization Plant (WTP)**

## **1.0 INTRODUCTION**

The WTP authorization basis is the composite of information provided by the Contractor in response to radiological, nuclear, and process safety requirements that is the basis on which the U.S. Department of Energy (DOE), Office of River Protection (ORP) grants permission to perform regulated activities. The authorization basis includes that information requested by the Contractor for inclusion in the authorization basis and subsequently accepted by the ORP. The authorization basis for the WTP includes the SRD.<sup>1</sup> The SRD contains the approved set of radiological, nuclear and process safety standards and requirements, which if implemented, provide adequate protection of workers, the public, and the environment against the hazards associated with the operation of the facility.

By letter dated January 24, 2003,<sup>2</sup> Bechtel National, Inc., (the Contractor) submitted proposed amendments to the SRD. This SER documents the ORP evaluation of the information provided by the Contractor in support of the change proposed for SRD Safety Criterion (SC) 5.4-10 in 24590-WTP-ABAR-ENS-02-006.

## **2.0 BACKGROUND**

The SRD contains the set of radiological, nuclear, and process safety standards necessary to ensure adequate protection of the health and safety of workers, co-located workers, the public, and the environment from radiological, nuclear, and process hazards. The SRD standards are developed by an iterative process. Included in the development process is a continuing review of industry practices, particularly those referenced in the SRD, and review of the results of the process hazards and accident analyses as they evolve with the design of the facility for potential impacts on the SRD standards used to ensure protection of the public and workers.

The Contractor proposed to change Notes 1, 2, 3 and 4 of SRD SC 5.4-10, but has not proposed to change the safety criterion itself. The Contractor provided information to support the proposed changes in Attachment 1 of its January 24, 2003 letter.

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<sup>1</sup> 24590-WTP-SRD-ESH-01-001-01, *Safety Requirements Document, Volume I* and 24590-WTP-SRD-ESH-01-001-02, *Safety Requirements Document, Volume II*.

<sup>2</sup> BNI letter from R. F. Naventi to R. J. Schepens, ORP, "Transmittal for Approval: Authorization Basis Amendment Request 24590-WTP-ABAR-ENS-02-006, Revision 0, *Update Safety Requirements Document Volume II, Safety Criterion 5.4-10* and 24590-WTP-ABAR-ENS-02-014, *Adoption of NFPA 801-2003 and Removal of Fire Protection Tailoring from the Safety Requirements Document*," CCN 048862, dated January 24, 2003.

### 3.0 EVALUATION

- 3.1 Proposed Change to SRD SC 5.4-10, Note 1:** The proposed change to Note 1 deletes text which refers to BNFL-5193-ID-03, Interface Control Document (ICD) 22 for air emissions, Table 2, stating the U.S. Department of Energy (DOE) will maintain the Hanford Site Air Operating Permit (AOP). The text in Note 1 stating DOE will provide access to meteorological data is retained. With these changes, Note 1 reads as follows:

“DOE will provide access to meteorological data.”

**Evaluation (acceptable):** The AOP includes requirements for maintenance and DOE is identified in the AOP as responsible for ensuring the AOP is maintained. The requirement for DOE to provide access to meteorological data is not changed. Therefore, the change to SRD SC 5.4-10, Note 1 is acceptable, provided the final text is as quoted above, because the proposed change is not a reduction in commitment or effectiveness.

- 3.2 Proposed Change to SRD SC 5.4-10, Note 2:** The proposed change to Note 2 deletes text which refers to BNFL-5193-ID-03, ICD 09 for land siting, Table 1, describing specific interface responsibilities for the Contractor and DOE, and Item 12 of the table, requiring the Contractor to perform any additional site characterization work beyond that which was performed by the DOE. The text in Note 2 stating the Radiation Protection Program (RPP) describes plans and measures for compliance with survey and contamination control requirements of 10 CFR 835 is retained. A statement is added to Note 2 requiring occurrence reporting and processing to follow DOE O 232.1A<sup>3</sup>. With these changes, Note 2 reads as follows:

“The Radiation Protection Program (RPP) describes the plans and measures for compliance with the survey and contamination control requirements of 10 CFR 835. Occurrence reporting and processing will follow DOE Order 232.1A.”

**Evaluation (conditionally acceptable):** The proposed changes remove explanatory discussions of site characterization work associated with transferring the WTP site to the Contractor. The requirement that the Contractor perform any additional site characterization work beyond that which was performed by the DOE has been maintained in Note 2. DOE Order 232.1A is the appropriate requirement to follow for occurrence reporting and processing. Therefore, the change to SRD SC 5.4-10, Note 2 is acceptable, provided the final text is as quoted above, because the proposed change is not a reduction in commitment or effectiveness.

- 3.3 Proposed Change to SRD SC 5.4-10, Note 3:** The proposed change to Note 3, sentence one, deletes introductory text that refers to BNFL-5193-ID-03, ICD 22 for air emissions and retains the requirement for DOE to operate near-facility monitoring. The proposed change modifies Note 3, sentence two, to clarify the means by which additional

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<sup>3</sup> The proposed change is different than what was originally proposed. Verbal communication with the Contractor determined the correct DOE Order reference to be included in Note 2, and the Contractor committed to reference DOE Order 232.1A for the text in Note 2.

monitoring will be provided. The proposed change deletes Note 3, sentence 3 (the last sentence). With these changes, Note 3 reads as follows:

“DOE will continue to operate site and near-facility monitoring networks in the vicinity of the WTP site. Additional monitoring which is required by applicable regulatory authorities will be provided for in accordance with applicable permit requirements. Changes to monitoring will be addressed through environmental permits.”<sup>4</sup>

**Evaluation (conditionally acceptable):** The proposed changes to Note 3 remove explanatory information that imposed no requirements, and updates Note 3 to ensure the Contractor will perform additional monitoring in accordance with applicable permit requirements, including requirements to perform near-facility monitoring consistent with Hanford Site environmental monitoring programs for inclusion in site annual reports. Therefore, the change to SRD SC 5.4-10, Note 3 is acceptable, provided the final text is as quoted above, because the proposed change is not a reduction in commitment or effectiveness.

- 3.4 Proposed Change to SRD SC 5.4-10, Note 4:** The proposed change to Note 4, sentence one, deletes a reference to BNFL-5193-ID-03, ICD 09 for land siting, Section 3.3, stating DOE will close groundwater monitoring well E25-32 prior to the start of site work. The proposed change revises Note 4, sentence 2, to read: “WTP liquid discharges will be within permit limits, as applicable.” The proposed change revises Note 4, sentence 3, to read: “Transfer piping to the Effluent Treatment Facility is by means of a pipe-in-pipe transfer line”.<sup>5</sup> The remainder of Note 4 is unchanged. With these changes, Note 4 reads as follows:

“WTP liquid discharges will be within permit limits as applicable. Transfer piping to the Effluent Treatment Facility is by means of a pipe-in-pipe transfer line. Potential leakage from the transfer pipe is contained, and collected by the outer pipe. Accidental release of the inner pipe contents would be detected by the transfer pipe leak detection equipment. If both inner and outer pipes failed, such leakage could result in soil contamination which would be remediated prior to any contamination reaching the ground water.”

**Evaluation (conditionally acceptable):** Deleting the reference to DOE closing monitoring well E25-32 is consistent with DOE’s current requirements to retain this well because it is a Resource Conservation and Recovery Act baseline-monitoring well. Revising the text to require that WTP liquid discharges be within permit limits, as applicable, is a correct revision because it is consistent with the actual operation of the WTP and ensures the Contractor must meet applicable permit limits for any liquid

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<sup>4</sup> The proposed change is different than what was originally proposed. Verbal communication with the Contractor resulted in clarification of the proposed changes and the Contractor committed to use this wording for the text in Note 3.

<sup>5</sup> The proposed change is different than what was originally proposed. Verbal communication with the Contractor confirmed the Contractor’s intent to use a pipe-in-pipe transfer line, and the Contractor committed to use this wording for the text in Note 4.

discharges from the WTP. The change to use “pipe-in-pipe transfer line” and eliminate specification of pipe dimensions is consistent with Hanford Site effluent discharge and design requirements. Therefore, the change to SRD SC 5.4-10, Note 4 is acceptable, provided the final text is as quoted above, because the proposed change is not a reduction in commitment or effectiveness.

#### **4.0 CONCLUSION**

On the basis of the considerations described above, and with the final text reading as stated above where noted as conditionally acceptable, the ORP has concluded there is reasonable assurance the health and safety of the public and the workers will not be adversely affected by the proposed ABAR changes, and the accepted changes comply with applicable laws, regulations, and WTP contractual requirements.